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permittee where (1) a permittee has applied in good faith for a time schedule order and is implementing the requirements in Attachment G pending approval of the time schedule order or (2) the Regional Board has initiated proceedings to revise the implementation schedule or other requirements of a TMDL and the permittee is implementing the requirements in Attachment G pending the outcome of the proceedings.

Unfunded Mandates Considerations Specific to TMDL Requirements in the Order

The TMDL requirements of this Order do not constitute unfunded state mandates requiring reimbursement.

The TMDL-specific requirements do not constitute a new program or higher level of service:

When a state agency requires a local government to provide “a new program or higher level of service,” the state must “reimburse that local government for the costs of the program or increased level of service.” (Cal. Const., art. XIII B, §6, subd. (a).) The TMDL-specific requirements of this Order, as amended on December 19, 2017, do not constitute a new program or higher level of service for two reasons.

First, the Order, as adopted on February 5, 2013 (effective July 1, 2013), requires permittees to “reduce the discharge of pollutants . . . to achieve TMDL wasteload allocations . . . established for discharges by the MS4s.” (Section C.1.) Attachment G listed the applicable TMDLs and specified requirements for implementation of the wasteload allocations. The 2017 amendments to the Order revise or clarify TMDL implementation requirements where requirements in the 2013 Order were unclear or too general. The amendments do not change the baseline requirement in Section C.1 that permittees reduce discharges of pollutants to achieve the wasteload allocations, but simply provide more clarity to the permittees in how to implement that ongoing requirement. Thus, the amendments do not constitute a new program, and do not constitute an increased level of service as permittees were already required to meet TMDL wasteload allocations by implementation of appropriate actions. Refinements of existing requirements do not constitute a higher level of service, even where there may be an increase in costs. (See *County of Los Angeles v. Comm'n on State Mandates*, 110 Cal.App.4th 1176, 1189-1195 [discussing case law on “new program” and “higher level of service”].)

Second, even where the 2013 Order has been amended to include requirements for TMDLs adopted since 2013, the TMDL-specific requirements are not a new program or higher level of service because the TMDLs are simply the mechanism to achieve compliance with water quality standards. The Order, as adopted in 2013, included receiving water limitations stating that “discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable Regional Water Board Basin Plan.” (Section D.) TMDLs are the means to implement water quality standards in impaired water bodies. Incorporation of TMDL-based requirements into the MS4 permit, consistent with applicable basin plans, allows the permittee greater flexibility in achieving the water quality standards in the receiving water by allowing additional time to meet the receiving water limitations or, in some cases, permitting interim compliance through management practice implementation rather than immediate compliance with numeric limitations. The TMDL-specific requirements accordingly do not constitute a new program or higher level of service as compared with the baseline requirement of the receiving water limitations.

The TMDL-specific requirements impose requirements that are mandated by federal law:

The TMDL-specific requirements of this Order also fit under exceptions to the requirement to reimburse local government for a new program or higher level of service. Most significantly, one exception exists if “[t]he statute or executive order imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation.” (Gov. Code, §17556, subd.(c).)

The TMDL-specific requirements of Attachment G are mandated by federal law and federal regulations. Clean Water Act Section 303(d) states that each state “shall” identify impaired waterbodies, “shall” prioritize such waters/watersheds for future development of TMDLs, and “shall” develop TMDLs for the appropriate pollutants in accordance with the prioritization. (33 U.S.C. § 1313(d).) The TMDLs must be approved by U.S. EPA. (Id.) The Code of Federal Regulations provides that once U.S. EPA approves a TMDL for a waterbody, the effluent limitations in any NPDES permit “shall” be “consistent with the assumptions and requirements of any available wasteload allocations.” (40 C.F.R. § 122.44(d)(1)(vii)(B).) Specific to Phase II MS4 permits, the Code of Federal Regulations states that “the permit will include... [m]ore stringent terms and conditions... based on an approved total maximum daily load...” (40 C.F.R. § 122.34(c)(1).)

Federal law thus compels the State Water Board to include the TMDL-specific provisions of Attachment G in the Phase II MS4 Permit.⁴⁰

The California Supreme Court’s 2016 decision in *Department of Finance v. Comm’n on State Mandates* (2016) 1 Cal.5th 749, as modified on denial of rehearing (Nov. 16, 2016) (*Department of Finance*) established a new framework for analyzing the federal mandates exception to article XIII B, section 6 of the Constitution. An agency order is not a federal mandate if (1) federal law gives the State discretion to impose the particular implementing requirement, and (2) the State exercises that discretion in imposing the requirement by virtue of a “true choice.” (*Department of Finance*, *supra*, 1 Cal.5th at 765.) That case concerned the discretion of the Los Angeles Water Board under the MEP standard and the court held that the Board had exercised a true choice in imposing certain requirements on the permittees. Here, the discretion exercised by the State Water Board in complying with section 122.44, subdivision (d)(1)(vii)(B) of Title 40 of the federal regulations is different and more limited than under the MEP standard. Title 40, Section 122.44, subdivision (d)(1)(vii)(B) specifically directs the Board to include effluent limitations which are consistent with the assumptions of any applicable wasteload allocations. The State Water Board had no choice but to include the TMDL-specific provisions in this Order that would result in attainment of the wasteload allocation within the timeframe established in the TMDL. The only discretion the Board employed when complying with section 122.44, subdivision (d)(1)(vii)(B) was crafting

⁴⁰ USEPA has similarly required attainment of applicable wasteload allocations in MS4 permits. (See, e.g., [sections 1.4.2 and 4.10 of Modified NPDES Permit No. DC0000022 for the MS4 for the District of Columbia, issued October 7, 2011, modified November 9, 2012](#), available at https://www3.epa.gov/reg3wapd/pdf/pdf_npdes/stormwater/DCMS4/MS4FinalLimitedModDocument/FinalModifiedPermit_10-25-12.pdf and section 2.1.1 and [Appendix F of the General Permit for Small MS4s in Massachusetts, issued April 4, 2016](#), available at <https://www3.epa.gov/region1/npdes/stormwater/ma/2016fpd/final-2016-ma-sms4-gp.pdf>)

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provisions which were consistent with the assumptions and requirements of the applicable wasteload allocations. In exercising this limited discretion, the Board simply translated the wasteload allocations directly into effluent limitations in the form of required control actions. This involved significantly less discretion than did the provisions at issue in *Department of Finance*. Further, in instances where the State Water Board and the appropriate regional water board determined that a choice of actions is available to the permittee to achieve the wasteload allocations in the required timeframe, Attachment G provides that the permittee may propose a set of actions for approval by the relevant regional water board.

Additional federal laws and regulations mandate inclusion of portions of the TMDL-specific requirements of this Order. Under Clean Water Act section 402, subdivision (p)(3)(B)(ii), MS4 permits must effectively prohibit non-storm water discharges into MS4s. (33 U.S.C.

§1342(p)(3)(B)(ii); see also 40 C.F.R. § 122.34(b)(3).) Several TMDLs implemented through this Order apply to dry weather discharges, i.e. non-storm water discharges, and require illicit discharge detection and elimination efforts to address non-storm water discharges. The federal regulations also require Phase II permits to incorporate an evaluation of “compliance with the terms and conditions of the permit, including the effectiveness of the components of [] storm water management program[s] and the status of achieving the measurable requirements in the permit” (40 C.F.R. §122.34(d)(1).) The TMDL requirements include monitoring and reporting to determine that the TMDL-specific requirements are leading to appropriate progress toward achievement of the wasteload allocations.

The MS4s have authority to levy service charges, fees, and assessments:

Another exception applies where “the local agency . . . has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.” (Gov’t Code, § 17556, subd. (d).) The MS4 permittees have the ability to charge fees, such as inspection fees or storm water fees, to cover the cost of the TMDL-specific requirements.

The TMDL-specific requirements are requirements of general applicability:

Finally, reimbursement to local agencies is required only for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities. (*City of Richmond v. Comm'n on State Mandates* (1998) 64 Cal.App.4th 1190, 1199.) The Clean Water Act and the federal regulations’ TMDL requirements are laws of general applicability, uniformly imposed on all NPDES permittees, including not just MS4s, but also industrial and construction storm water dischargers, as well as traditional NPDES permittees such as wastewater treatment plants.

For the foregoing reasons, the TMDL requirements of this Order do not constitute unfunded mandates requiring reimbursement.

Basis of TMDL-Related Permit Requirements

The following discussion provides the basis for the TMDL-related requirements in Attachment G of this Order.

NORTH COAST REGIONAL WATER BOARD TMDLs

Laguna de Santa Rosa Ammonia & Dissolved Oxygen TMDL

The Laguna de Santa Rosa Ammonia and Dissolved Oxygen TMDL was approved by U.S. EPA as the Waste Reduction Strategy for the Laguna de Santa Rosa, dated March 1, 1995. The Waste Reduction Strategy provided the assumptions and goals used to determine the best option to reduce impacts to the Laguna de Santa Rosa, and attain water quality goals and objectives. The Regional Water Board, however, found the Waste Reduction Strategy to be unenforceable and inadequate to address the declining dissolved oxygen issues in Laguna de Santa Rosa. In 2002, the Regional Water Board determined that dissolved oxygen objectives were being violated and that nutrient loads were on the rise. The Regional Water Board is in the process of developing a TMDL for the Laguna de Santa Rosa for nitrogen, phosphorus, dissolved oxygen, temperature and sediment. Due to the above findings and TMDL development efforts, the State Water Board has removed the Waste Reduction Strategy requirements in this Order.

Shasta River Watershed Temperature & Dissolved Oxygen TMDL

The Shasta River watershed includes all tributaries and Lake Shastina in Siskiyou County. The Shasta River Watershed Temperature and Dissolved Oxygen TMDL and Action Plan was adopted by the North Coast Regional Water Board on June 28, 2006. The Shasta River Watershed Temperature and Dissolved Oxygen TMDL was approved by U.S. EPA and became effective on January 26, 2007. The Shasta River TMDL Action Plan contains the goals and assumptions used to develop the wasteload allocations and conditions to be considered in conducting actions (in this case, storm water management) in the Shasta River watershed.

The North Coast Regional Water Board has determined that the City of Yreka, a Traditional Small MS4 permittee, is a source of “human activity” subject to this TMDL and must comply with the TMDL-requirements of this Order. The TMDL does not specify wasteload allocations for the City of Yreka, but does require the City of Yreka to develop and implement a plan to minimize and control pollutants of concern in urban storm water runoff. That plan was developed and submitted on June 24, 2013, as part of the City’s Notice of Intent for this Order. Attachment G of this Order requires the City to implement this plan no later than January 1, 2019. Therefore, the City will be required to implement the plan immediately. There are no current monitoring requirements for the City related to TMDL implementation.

SAN FRANCISCO BAY REGIONAL WATER BOARD TMDLs

Napa River Sediment TMDL

The Napa River and its tributaries are listed as impaired due to excessive sediment. The river was listed on the Clean Water Act section 303(d) in response to concerns regarding adverse impacts to habitat for steelhead trout, chinook salmon, and other threatened species whose populations have declined substantially in recent decades. The Napa River Sediment TMDL and Habitat Enhancement Plan identify pollutant sources of concern, and specify actions to restore a healthy fishery in the watershed.

The Napa River Sediment TMDL identifies urban storm water runoff, specifically storm water runoff from State highways, and industrial and construction sites as a source of impairment. The Napa River Sediment TMDL names parties that should implement measures to control and/or prevent sediment discharges associated with urban storm water runoff (hereinafter

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referred to as Implementing Parties). Attachment G of this Order assigns requirements to the Traditional Small MS4 designees identified as Implementing Parties within the Napa River Sediment TMDL.

Wasteload Allocations (WLA): The Napa River Sediment TMDL includes a WLA of 800 metric tons/year for storm water runoff discharges from stream crossings and storm water runoff discharges associated with operation of public and private roads, paved and unpaved within the watershed not otherwise covered by NPDES permits issued to Napa County and municipalities including the City of Napa, Town of Yountville, City of St. Helena, City of Calistoga, and City of American Canyon.

Load Allocations (LA): The Napa River Sediment TMDL also includes an LA of 27,000 metric tons/year that applies to a roads and streams crossings source category that Napa County and the City of Napa, Town of Yountville, City of St. Helena, City of Calistoga, and City of American Canyon share with Caltrans. Caltrans is responsible for runoff from State highways and associated construction activities. Discharges from State highways are regulated by the State Water Board's statewide municipal storm water permit issued to Caltrans; discharges of storm water from construction activities are regulated by the State Water Board's Statewide Storm Water Permit for Discharges Associated with Construction and Land Disturbance Activity.

Deliverables/Actions Required:

The TMDL-related requirements in this Order are based on the TMDL Implementation Plan. To implement the roads and stream crossings allocation, the TMDL Implementation Plan establishes a performance standard for roads as follows: road-related sediment delivery to channels should be ≤ 500 cubic yards per mile per 20 year period. The TMDL Implementation Plan also calls on entities responsible for paved roads to conduct a survey of stream-crossings associated with paved public roadways and develop a prioritized implementation plan for repair and/or replacement of high priority crossings/culverts to reduce road related erosion and protect stream-riparian habitat conditions. Napa County was timely in submitting an implementation plan by October 2014.

Attainment of water quality objectives will be evaluated at the confluence of Napa River with Soda Creek, which includes the downstream boundary of freshwater habitat for salmon and steelhead. Attainment of the water quality objectives will be evaluated over a 5-to-10-year averaging period.

Sonoma Creek Sediment TMDL

The Sonoma Creek Sediment TMDL includes a wasteload allocation that applies to storm water runoff discharges from stream crossings and public and private roads (paved and unpaved) within the watershed that are not otherwise covered by a Phase 1 NPDES MS4 permit issued to the County and/or City of Sonoma.

The Sonoma County Water Agency has been a voluntary participant with proactive storm water control efforts, including enrollment under the previous 2003 Small MS4 permit (Order 2003-0005-DWQ). The Sonoma County Water Agency owns and operates approximately 2,000 linear feet of stream channel within the Sonoma Creek watershed. Therefore, the Agency is subject to the TMDL, as expressed by the requirements in Attachment G.

Phase II Entities:

The Sonoma Creek Sediment TMDL identifies urban storm water runoff from Phase II entities, State highways, and industrial and construction storm water discharges, as a source of

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impairment. The TMDL names parties that should implement measures to control and/or prevent sediment discharges associated with urban storm water runoff (hereinafter referred to as Implementing Parties). Attachment G of this Order assigns requirements to the designees identified as Implementing Parties within the TMDL.

Wasteload and Load Allocations:

The Sonoma Creek sediment TMDL assigns a wasteload allocation to municipal storm water and a load allocation for the roads source category. The sediment wasteload allocation is 600 tons/year and applies to storm water runoff discharges from Phase II permittees. The load allocation of 2,100 tons/year of sediment is for the road and stream crossings category and applies to stream crossings and storm water runoff discharges associated with operation of public and private roads (paved and unpaved) within the watershed not otherwise covered by an NPDES storm water permit.

Municipalities share the wasteload allocation with another entity (i.e., Caltrans). Caltrans is responsible for runoff from State highways and associated construction activities. Discharges from State highways are regulated by the State Water Board statewide municipal storm water permit issued to Caltrans; discharges of storm water from construction activities are regulated by the State Water Board Statewide Storm Water Permit for Discharges Associated with Construction and Land Disturbance Activity.

Deliverables/Actions Required:

The TMDL-related requirements in this Order are based on the TMDL Implementation Plan. To implement the roads and stream crossings allocation, the TMDL Implementation Plan establishes a performance standard for the design, construction, and maintenance of rural roads to minimize road-related sediment delivery to streams. The Implementation Plan also requires entities responsible for paved roads, such as the City and County of Sonoma, to: (1) adopt and implement best management practices for maintenance of unimproved (dirt/gravel) roads, (2) conduct a survey of stream-crossings associated with paved public roadways, (3) develop a prioritized implementation plan for repair and/or replacement of high priority crossings/culverts to reduce road related erosion, and (4) protect stream-riparian habitat conditions.

TMDL compliance, and water body attainment with the sediment water quality objectives, will be evaluated at the limit of tidal influence in the Sonoma Creek watershed, which approximates the downstream boundary of freshwater habitat for steelhead. Sonoma Creek has several tributaries that join the main stem below the tidal limit; therefore, several locations will be used to evaluate water body attainment. These locations are: (1) the main stem Sonoma Creek immediately downstream of the Fowler/Carriger Creek confluence, and (2) the freshwater portions (above tidal influence) of Schell, Ramos, Carneros, and Merazo Creeks. Attainment of the sediment water quality objectives will be evaluated over a 5-to-10-year averaging period.

This Order does not directly require the preparation and implementation of Storm Water Management Plans as required in the previous 2003 Storm Water Permit (Order 2003-0005-DWQ). However, the specific implementation actions for attenuation of peak flows and durations from new and redevelopment projects that were proposed by Permittees in the Storm Water Management Plans approved under the previous 2003 Storm Water Permit are incorporated herein by reference. The municipalities identified in this TMDL section shall continue to implement those specific actions to attenuate peak flows and durations from new

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and redevelopment projects as stated in Attachment G. Municipalities may propose amendments to those actions by submitting an updated proposal for attenuation of peak flows and durations to the San Francisco Bay Regional Water Board.

Napa River Pathogens TMDL

The Napa River Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The San Francisco Water Board has determined that the Cities of American Canyon, Calistoga, St. Helena and Napa, the Town of Yountville and the County of Napa, Traditional Small MS4s, are sources of “municipal runoff” subject to this Order and are responsible for implementing the requirements of this TMDL.

Load Allocations:

The Napa River pathogens TMDL assigns a load allocation to municipal storm water as follows:

[All are in units of CFU per 100 milliliters]

<u>E.coli</u> Geometric Mean	<u>E.coli</u> 90 th percentile	<u>Fecal coliform</u> Geometric Mean	<u>Fecal coliform</u> 90 th percentile	<u>Total coliform</u> Median	<u>Total coliform</u> Single Sample Max
<113	<368	<180	<360	<216	9,000

These allocations are applicable year-round and apply to any sources (existing or future) subject to regulation by NPDES permit.

Deliverables/Actions Required:

The TMDL-related requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the pathogen TMDL requires parties responsible for municipal runoff (i.e., Napa County and municipalities including the City of Napa, Town of Yountville, City of St. Helena, City of Calistoga, and City of American Canyon) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary to include actions that will lead to compliance with the requirements of this Order. The management plans must address:(1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Sonoma Creek, and (4) pollution prevention strategies. The Implementation Plan also requires these municipalities to participate in evaluation of E. coli concentration trends in the Napa River and its tributaries and to report annually on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures. The implementation actions are expected to build on existing programs. The Permittee must report on its implementation actions in the Annual Report.

Sonoma Creek Pathogens TMDL

The Sonoma Creek Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

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The Sonoma County Water Agency has been a voluntary participant with early storm water control efforts, including enrollment under the previous Small MS4 permit (Order 2003-0005-DWQ). The Sonoma County Water Agency owns and operates approximately 2,000 linear feet of stream channel within its service area. The Agency is also enrolled under this Order and, as such, is subject to the TMDL, expressed as requirements in Attachment G.

Phase II Entities:

The San Francisco Water Board has determined that the City of Sonoma, the County of Sonoma, and the Sonoma County Water Agency, Traditional Small MS4 permittees, are sources of “municipal runoff” subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The Sonoma Creek pathogens TMDL assigns a wasteload allocation to municipal storm water as follows:

[Units: CFU/100 milliliters]

<u>E.coli</u> Geometric Mean	<u>E.coli</u> 90 th percentile	<u>Fecal coliform</u> Geometric Mean	<u>Fecal coliform</u> 90 th percentile	<u>Total coliform</u> Median	<u>Total coliform</u> Single Sample Max
<113	<368	<180	<360	<216	9,000

These allocations are applicable year-round and apply to any sources (existing or future) subject to regulation by NPDES permit.

Deliverables/Actions Required:

The TMDL-related requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the pathogen TMDL requires parties responsible for municipal runoff (i.e., City and County of Sonoma) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary to include actions that will lead to compliance with the requirements of this Order. The management plans must address: (1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Sonoma Creek, and (4) pollution prevention strategies. The Implementation Plan also requires the City and County of Sonoma to participate in evaluation of E. coli concentration trends in Sonoma Creek and its tributaries and to report annually on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures. The implementation actions are expected to build on existing programs. The Permittee must report on its implementation actions in the Annual Report.

For the Sonoma County Water Agency, the TMDL implementation requirements of this Order are incorporated by reference to the Storm Water Management Plan approved under the previous 2003 Storm Water Permit (Order 2003-0005-DWQ). The Sonoma County Water Agency must comply with the compliance dates established in its previously approved Storm Water Management Plans.

Tomales Bay Pathogens TMDL

The Tomales Bay Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The San Francisco Water Board has determined that the County of Marin is a source of municipal runoff subject to this Order and that the County is responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The Tomales Bay Pathogens TMDL assigns a wasteload allocation to municipal storm water as follows:

- Note a: These allocations are applicable year-round and apply to any sources (existing or future) subject to regulation by NPDES permit.
- Note b: Based on a minimum of five consecutive samples equally spaced over a 30-day period.
- Note c: No more than 10% of total samples during any 30-day period may exceed this number.

Fecal Coliform ^{Note a} (Most Probable Number per 100 milliliters)

For Direct Discharges to Tomales Bay

Median ^{Note b:} <14

90th percentile ^{Note c:} <43

For Discharges to Major Tomales Bay Tributaries

Log Mean ^{Note b:} <200

Deliverables/Actions Required:

The TMDL-related requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the Pathogen TMDL requires parties responsible for municipal runoff (i.e., Marin County) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary to include actions that will lead to compliance with the requirements of this Order. The management plans must address:(1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Tomales Bay and its tributaries including Olema, Lagunitas, and Walker Creeks, and (4) pollution prevention strategies. The Implementation Plan also requires these municipalities to participate in evaluation of E. coli concentration trends in Tomales Bay and its tributaries and to report annually on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures. The Implementation Plan anticipates that dischargers (including Marin County) and stakeholders, in collaboration with the Water Board will conduct water quality monitoring to evaluate fecal coliform concentration trends in Tomales Bay and its tributaries.

The implementation actions are expected to build on existing local storm water management programs and ongoing efforts to reduce pathogen loads to Tomales Bay and its tributaries. The Permittee must report on its implementation actions in the Annual Report.

Richardson Bay Pathogens TMDL

The Richardson Bay Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The San Francisco Water Board has determined that the Cities of Belvedere, Mill Valley, Sausalito, Tiburon and the County of Marin, Traditional Small MS4s, are a source of “municipal runoff” subject to this TMDL and must comply with the requirements of the Richardson Bay Pathogens TMDL in this Order.

Wasteload Allocations:

The Richardson Bay Pathogens TMDL assigns a wasteload allocation to municipal storm water as follows:

Note a: These allocations are applicable year-round.

Note b: Based on a minimum of five consecutive samples equally spaced over a 30-day period.

Note c: No more than 10% of total samples during any 30-day period may exceed this number.

Fecal Coliform ^{note a}, (Most Probable Number per 100 milliliters)

Median ^{note b}: <14

90th percentile ^{note c}: <43

Deliverables/Actions Required:

The requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the pathogen TMDL requires parties responsible for municipal runoff (i.e., Marin County, City of Mill Valley, City of Tiburon, City of Belvedere, and City of Sausalito) to comply with storm water management plans previously developed. The municipalities’ management plans must be updated and/or amended as necessary, to include actions that will lead to compliance with the requirements of this Order. The management plans must address: (1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Sonoma Creek, and (4) pollution prevention strategies. The Implementation Plan also requires these parties responsible for municipal runoff to report annually on progress made on implementation of human and animal runoff reduction measures.

The implementation actions are expected to build on existing local storm water management programs. The Permittee must report on its implementation actions in the Annual Report.

Urban Creeks Diazinon and Pesticide Toxicity TMDL

The Urban Creeks Diazinon and Pesticide TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. This provision implements requirements of the TMDL for Diazinon and pesticide-related toxicity for Urban Creeks in the San Francisco Bay Region. Pesticides of concern include: organophosphorus pesticides (chlorpyrifos, diazinon, and malathion); pyrethroids (bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and tralomethrin); carbamates (e.g., carbaryl); and fipronil.

Phase II Entities:

The San Francisco Water Board has determined that the following municipalities are a source of “urban runoff” subject to this TMDL and must comply with the TMDL-related requirements of this Order: (1) the Cities of Belvedere, Larkspur, Mill Valley, Novato, Petaluma, San Rafael, Sausalito, and Sonoma, (2) the Towns of Corte Madera, Fairfax, Ross, San Anselmo, and Tiburon, and (3) the Counties of Marin and Sonoma, Traditional Small MS4 permittees.

Wasteload Allocations:

Diazinon: 100 nanograms/liter (ng/l) (one-hour average)

Toxicity: 1.0 Acute Toxicity Unit (TUa) and 1.0 Chronic Toxicity Unit (TUC)

Deliverables/Actions Required:

The requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the Urban Creeks and Diazinon and Pesticide Toxicity TMDL requires parties responsible for municipal runoff (i.e., Marin County, City of Belvedere, Town of Corte Madera, Town of Fairfax, City of Larkspur, City of Mill Valley, City of Novato, Town of Ross, Town of San Anselmo, City of San Rafael, City of Sausalito, Town of Tiburon, County of Sonoma, City of Sonoma, and City of Petaluma) to adopt an Integrated Pest Management Policy (IPM) or ordinance, as the basis of a Pesticide-Related Toxicity Program. Implementation actions of the Pesticide-Related Toxicity Program must include: a) training of all municipal employees who use or apply pesticides in the IPM practices and policy/ordinance, b) requiring contractors to implement IPM, c) keeping County Agricultural Commissioners informed of water quality issues related to pesticides, d) conducting outreach to residents and pest control applicators on less toxic methods for pest control, e) keeping records on pesticide use, and f) monitoring water and sediment for pesticides and associated toxicity in urban creeks via an individual or regional monitoring program.

The term “integrated pest management,” as used for the purpose of this Order, refers to a process that includes setting action thresholds, monitoring and identifying pests, preventing pests, and controlling pests when necessary. Integrated pest management meets the following conditions:

- Pest control practices that focus on long-term pest prevention through a combination of techniques, such as biological control, habitat manipulation, and modification of cultural practices;
- Pesticides are used in response to monitoring indicating that pesticides are needed; Pesticide applications with the goal of removing only the target pest; and
- Pesticides are selected to minimize risks to human health, beneficial and non-target organisms, and the environment, including risks to aquatic habitats.

The term “less toxic pest control,” as used for the purpose of this Order, refers to the use of pest control strategies selected to minimize the potential for pesticide-related toxicity in water and sediment.

Permittees are required to reduce discharges of pollutants, including pesticides, to the maximum extent practicable as required by this Order.

CENTRAL COAST REGIONAL WATER BOARD TMDLs**For All TMDLs Requiring Wasteload Allocation Attainment Programs**

For TMDLs that identify municipal storm water as a contributor to water body impairment, MS4s must reduce their wasteload discharges in accordance with TMDLs. The Central Coast Regional Water Board requires MS4s to develop Wasteload Allocation Attainment Programs to achieve compliance with the TMDL. The TMDLs set forth the expectation that the MS4s achieve their wasteload allocations within specified timeframes. The Wasteload Allocation Attainment Program approach differs from the typical regulatory requirements applied to municipal storm water (BMP implementation per an iterative process of continual improvement for achieving water quality standards). The MS4s' contribution to the impairment of water bodies, combined with the TMDL expectation that municipalities achieve their wasteload allocations within specified timeframes, necessitates a systematic approach to program implementation as it relates to the discharge of pollutants associated with impairments.

Federal regulations indicate that such an approach is appropriate. The Preamble to the Phase II federal storm water regulations states: "Small MS4 permittees should modify their programs if and when available information indicates that water quality considerations warrant greater attention or prescriptiveness in specific components of the municipal program."⁴¹

The Central Coast Water Board developed the Wasteload Allocation Attainment Program approach as a means to systematically guide municipalities towards attainment of their wasteload allocations. Without a systematic approach of this type, attainment of wasteload allocations within an identified time period is unlikely. Local municipal storm water management programs typically include basic or minimum BMPs to be implemented to attain water quality objectives. While some BMPs provide effective treatment and management of urban runoff, the connection between BMP effectiveness and attainment of wasteload reductions is unclear. Municipalities have implemented BMPs, yet water body impairment continue due to the inability for BMPs implemented by MS4s to address all the water quality issues identified in TMDLs. The demonstration of BMP implementation in a non-systematic approach failing to address impairments indicates that a systematic approach, as represented by the Wasteload Allocation Attainment Programs, is warranted.

On a broader scale, existing storm water programs often do not provide and/or exhibit the rationale used for BMP selection, or draw connections between those BMPs selected and attainment of wasteload allocations. Without a programmatic level of planning and design, attainment of wasteload allocations within specified timeframes may not take place. The Wasteload Allocation Attainment Program requirements are expressly designed to ensure adequate planning is conducted so that MS4s' TMDL implementation efforts are effective to achieve regulatory compliance. Wasteload Allocation Attainment Program development and implementation include the following items on a TMDL-specific basis: (1) An implementation and assessment strategy; (2) source identification and prioritization; (3) BMP identification, prioritization, implementation (including schedule), analysis⁴², and assessment; (4) monitoring

⁴¹ 64 FR 68753

⁴² This analysis must be a quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation achieved the MS4's wasteload allocation. This analysis will most likely incorporate modeling efforts.

program development and implementation (including schedule); (5) reporting and evaluation of progress towards complying with wasteload allocations; and (6) coordination with stakeholders. The United States Environmental Protection Agency (U.S. EPA) forwards similar approaches for TMDL implementation in its Draft TMDLs to Storm Water Permits Handbook, which discusses BMP review and selection, establishing linkages between BMP implementation and load reductions, effectiveness assessment, and BMP/outfall/receiving water monitoring.⁴³

Ultimately, the Wasteload Allocation Attainment Programs place the responsibility for program development, assessment, improvement, and success on the municipalities since municipal storm water has been identified as contributing to the water quality impairment. The Regional Water Board will collectively assess the progress of the various pollutant sources towards achieving receiving water quality standards as part of its triennial Basin Planning review, but each source must be responsible for assessing its own progress towards achieving its wasteload allocation. The process of planning, assessment, and refinement outlined by the Wasteload Allocation Attainment Programs helps ensure continual improvement and ultimate attainment of water quality standards at impaired receiving waters.

This Order implements TMDLs that have either a past-due or upcoming attainment date. In such instances, the Regional Water Board may determine, based upon past and proposed future actions, that the method for a permittee to attain the wasteload allocations will include further assessment and improvement upon implementation of the Wasteload Allocation Attainment Plans. The Permittee may request a Time Schedule Order from its Regional Water Board to allow additional time for compliance with the TMDL requirements.

[View Central Coast TMDLs online](#) at:

http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/303d_and_tmdl_projects.shtml

Morro Bay and Chorro and Los Osos Creeks Pathogens TMDL

The Morro Bay and Chorro and Los Osos Creeks Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. Pennington Creek and Warden Creek are tributaries of Los Osos Creek, and are therefore included in the TMDL.

Although several waterbodies were named in the Attachment G of this Order, as adopted by the State Water Board on February 5, 2013, three waterbodies (San Bernardo, San Luisito, and Walters Creeks) have been removed (by this amendment) due to these waterbodies (and their watersheds) being outside the permitting boundary areas of the Phase II entities below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the City of Morro Bay and the County of San Luis Obispo, Traditional Small MS4 permittees, are a source of “urban runoff” subject to this TMDL, and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The City of Morro Bay and County of San Luis Obispo are assigned the following wasteload allocations:

⁴³ U.S. EPA. 2008. Draft TMDLs to Stormwater Permits Handbook. Chapters 5 and 6.

For discharges to Los Osos Creek, Chorro Creek, and their tributaries:

- 1) The fecal coliform geometric mean concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed 200 Most Probable Number/100 milliliters, and
- 2) The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number/100 milliliters.

For discharges to Morro Bay:

- 1) The fecal coliform geometric mean concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed 14 Most Probable Number/100 milliliters, and
- 2) The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 43 Most Probable Number/100 milliliters.⁴⁴

Deliverables/Actions Required:

The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. fecal coliform density measurements. Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, per the requirements in Attachment G of this Order. By February 5, 2014 the City of Morro Bay and County of San Luis Obispo were required to develop, submit, and begin implementation of a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. Therefore, effective immediately, the MS4 shall implement the Wasteload Allocation Attainment Program.

The TMDL specifies that all wasteload allocations must be achieved by November 19, 2013. Since the deadline is past, the wasteload allocations are effective immediately. The Permittee may request a Time Schedule Order from its Regional Water Board to allow additional time for compliance with the TMDL requirements.

Watsonville Slough Pathogens TMDL

The Watsonville Slough Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the City of Watsonville and the County of Santa Cruz, Traditional Small MS4 permittees, are a source of “urban storm water” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The City of Watsonville and the County of Santa Cruz are assigned the following concentration-based wasteload allocations:

⁴⁴ For all Central Coast Water Board fecal indicator bacteria and pathogens TMDLs, E. coli concentrations may be used as a surrogate for fecal coliform concentrations.

- 1) The fecal coliform log mean concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed 200 Most Probable Number/100 milliliters, and
- 2) The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number/100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Watsonville is assigned the above wasteload allocations in the following water bodies: Watsonville, Struve, Harkins, Gallighan and Hanson Sloughs.

The County of Santa Cruz is assigned the above wasteload allocation in the following water bodies: Watsonville, Struve and Harkins Sloughs.

Deliverables/Actions Required:

Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, as required in Attachment G of this Order.

The TMDL specifies that all allocation must be achieved by November 20, 2016. The Permittee may request a Time Schedule Order from its Regional Water Board to allow additional time for compliance with the TMDL requirements.

Pajaro River, San Benito River, Llagas Creek, Tequesquita Slough, San Juan Creek, Carnadero/Uvas Creek, Bird Creek, Pescadero Creek, Tres Pinos Creek, Furlong (Jones) Creek, Santa Ana Creek, and Pachecho Creek Fecal Coliform TMDL

The above-named Fecal Coliform TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the Cities of Gilroy, Hollister, Morgan Hill, Watsonville, and the Counties of Monterey, Santa Clara, and Santa Cruz, Traditional MS4 permittees, are a source of "MS4 discharges" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The Cities of Hollister, Morgan Hill, Gilroy and Watsonville and the Counties of Monterey, Santa Clara and Santa Cruz are assigned the following concentration based wasteload allocations:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharges shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The Cities of Hollister, Morgan Hill, Gilroy and Watsonville and the Counties of Santa Cruz, Santa Clara and Monterey are assigned the above wasteload allocations in the following water bodies: Pajaro River, San Benito River, Llagas Creek and Tequesquita Slough.

Deliverables/Actions Required:

Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, as required in Attachment G of this Order. The TMDL specifies that all allocations must be achieved by July 12, 2023.

Morro Bay Sediment TMDL

The Morro Bay Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Although San Bernardo and San Luisito Creeks were named in Attachment G of this Order as adopted by the State Water Board on February 5, 2013, the requirements of this Order are not applicable to these water bodies because the water bodies (and their watersheds) are outside the permit boundary areas of the Phase II entities, below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the County of San Luis Obispo, a Traditional MS4 permittee, is a source of “urban land use” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. pool residual volume, median diameter of spawning gravel, etc. The TMDL also expressed the sediment assimilative capacity and allocations required to achieve the numeric targets. The allocations require a 50% reduction of current loading (estimated in 2003) to achieve the numeric targets. The wasteload allocations assigned to the responsible parties in this permit represent a 50% reduction from 2003 loading estimates.

The County of San Luis Obispo is assigned a wasteload allocation of 5,137 tons/year of sediment. The aggregated sediment discharge from all storm water outfalls into Morro Bay, or any tributary that has the potential to discharge sediment to Morro Bay, shall not exceed the allocation.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The County of San Luis Obispo is assigned allocations in the following water bodies: Morro Bay, Los Osos Creek, Chorro Creek, Dairy Creek, Pennington Creek, and Warden Creek.

Deliverables/Actions Required:

Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, laid out in detail in Attachment G of this Order.

The allocations shall be achieved by December 3, 2053.

San Lorenzo River Sediment TMDL

The San Lorenzo River Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the Cities of Santa Cruz, Scotts Valley and the County of Santa Cruz, Traditional MS4 permittees, are a source of “Other Urban and Rural Land” and “Public and Private Roads” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. pool residual volume, median diameter of spawning gravel, etc. The TMDL also expressed the sediment assimilative capacity and allocations required to achieve the numeric targets. The allocations require reductions of 24-27 percent of current sediment loading (estimated in 2002) to achieve the numeric targets. The wasteload allocations assigned to the responsible parties in this permit represent a 24-27 percent reduction from the 2003 loading estimates.

The County of Santa Cruz, City of Santa Cruz, and City of Scotts Valley are assigned the following wasteload allocations:

- The sediment discharge loading from public roads to the San Lorenzo River shall be reduced by 27%,
- The sediment discharge loading from public roads to Lompico Creek shall be reduced by 24%,
- The sediment discharge loading from public roads to Carbonera Creek shall be reduced by 27%,
- The sediment discharge loading from public roads to Shingle Mill Creek shall be reduced by 27%.

Deliverables/Actions Required:

Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program as required in Attachment G of this Order. The allocations shall be achieved by December 18, 2028.

Pajaro River (including Llagas Creek, Rider Creek and San Benito River) Sediment TMDL

The Pajaro River (including Llagas Creek, Rider Creek and San Benito River) Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. The TMDL names “urban lands within NPDES Phase II urban boundaries” as a Land Use Source Category of sediment loading to the Corralitos Creek subbasin and assigns a wasteload allocation to this category.

Phase II Entities:

The Central Coast Water Board has determined that the Cities of Gilroy, Hollister, Morgan Hill and Watsonville, Traditional MS4 permittees, are sources of “municipal runoff” and must comply with the TMDL-related requirements of this Order.

The Santa Cruz County Fairgrounds is located within the Corralitos Creek subbasin (subbasin number 4) and constitutes “urban lands within NPDES Phase II urban boundaries.” The Central Coast Water Board has additionally determined that the Santa Cruz County

Fairgrounds, a Non-Traditional MS4 permittee, must incorporate provisions for complying with the wasteload allocations described in the TMDL as part of its compliance with this Order.

Wasteload Allocations:

The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. pool residual volume, median diameter of spawning gravel, etc. The TMDL also provides the sediment assimilative capacity and allocations required to achieve the numeric targets. The allocations require reductions of 90 percent from current sediment loading (estimated in 2005) to achieve the numeric targets. The wasteload allocations assigned to the responsible parties in this permit represent a 90 percent reduction of the 2005 loading estimate.

The City of Morgan Hill, City of Gilroy, City of Hollister, Santa Cruz County Fairgrounds, and the City of Watsonville shall not discharge sediment to the following water bodies in excess of the values shown:

Major Subwatershed	Metric tons per year
Tres Pinos	1
San Benito River	100
Llagas Creek	787
Uvas Creek	139
Upper Pajaro River	161
Corralitos (including Rider Creek)	284
Mouth of Pajaro River	191

Deliverables/Actions Required:

The Central Coast Water Board has determined that compliance with Phase II MS4 permit requirements tailored to focus on reduction of sediment discharges to the affected waterbodies is sufficient to achieve the wasteload allocations. The allocations shall be achieved by November 27, 2051.

San Luis Obispo Creek Pathogens TMDL

The San Luis Obispo Creek Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the City of San Luis Obispo and the County of San Luis Obispo, Traditional MS4 permittees, and the California Polytechnic (Cal Poly) State University, a Non-Traditional MS4 permittee, are a source of "Urban" and "Human" sources subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The City of San Luis Obispo, the County of San Luis Obispo, and the Cal Poly State University-San Luis Obispo, are assigned the following concentration-based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of San Luis Obispo is assigned these allocations in San Luis Obispo Creek and Stenner Creek.

The County of San Luis Obispo is assigned these allocations in the San Luis Obispo Creek.

Cal Poly State University-San Luis Obispo is assigned these allocations in Stenner Creek and Brizziola Creek.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

Deliverables/Actions Required:

Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program per requirements in Attachment G of this Order. The TMDL specifies that all allocations must be achieved no later than July 25, 2015. The allocations are therefore effective immediately. A permittee with a past deadline may request a Time Schedule Order from the applicable Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the permittee to comply with the TMDL requirements that will supersede the deadlines referenced in this Order.

San Luis Obispo Creek Nitrate-Nitrogen TMDL

The San Luis Obispo Creek Nitrate-Nitrogen TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the City of San Luis Obispo and the County of San Luis Obispo, Traditional MS4 permittees, and Cal Poly State University, a Non-Traditional MS4 permittee, are a source of "Residential areas" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

Urban storm water from the City of San Luis Obispo, County of San Luis Obispo, and Cal Poly State University shall not cause an increase in the receiving water nitrate concentration greater than the increase in nitrate concentration resulting from their discharge in 2006 (when the TMDL became effective). In 2006, the nitrate concentration of storm water discharge was 0.3 mg/L-N.

The City of San Luis Obispo, County of San Luis Obispo, and Cal Poly State University were achieving their allocations at the time the TMDL became effective; these municipalities shall implement measures to assure continued attainment of their allocations.

Deliverables/Actions Required:

The Central Coast Water Board has determined that compliance with the requirements of this Phase II MS4 permit, tailored to focus on reduction of nutrient discharges to the affected water bodies, is sufficient to achieve the wasteload allocations.

The TMDL specifies that the target date to achieve the TMDL is during or before year 2012. The allocations are therefore effective immediately. A permittee is not in need of a Time Schedule Order from the applicable Regional Water Board since these permittees were achieving their allocations at the time the TMDL became effective, and are expected to continue implementing measures to assure continued attainment of their allocations.

Corralitos and Salsipuedes Creeks Fecal Coliform TMDL

The Corralitos and Salsipuedes Creeks Fecal Coliform TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. The TMDL also names “Owners of private sewer laterals (Private sewer laterals connected to municipal sanitary sewer collection system)” as a responsible party and assigns a wasteload allocation.

Phase II Entities:

The Central Coast Regional Water Board has determined that the City of Watsonville and the County of Santa Cruz, Traditional MS4 permittees, and the Santa Cruz County Fairgrounds, a Non-Traditional MS4 permittee, are a source of “Storm drain discharges” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The County of Santa Cruz and the City of Watsonville, and the Santa Cruz County Fairgrounds are assigned the following concentration-based wasteload allocation:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The County of Santa Cruz and the City of Watsonville and the Santa Cruz County Fairgrounds, are assigned the above allocations in the following water bodies: Corralitos Creek and Salsipuedes Creek.

Deliverables/Actions Required:

Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program, discussed in detail in Attachment G of this Order. All allocations shall be achieved no later than September 8, 2024.

Lower Salinas River Watershed Fecal Coliform TMDL

The Lower Salinas River Watershed Fecal Coliform TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the County of Monterey, a Traditional MS4 permittee, is a source of “Discharges from MS4s” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

The County of Monterey is assigned allocations in the following water bodies:

The Lower Salinas River, the Old Salinas River Estuary, the Tembladero Slough, the Salinas Reclamation Canal, the Alisal Creek, the Gabilan Creek, the Salinas River Lagoon (North), and the Santa Rita Creek.

Wasteload Allocations:

The County of Monterey is assigned the following concentration based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

Deliverables/Actions Required:

Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program per the requirements in Attachment G of this Order. All allocations shall be achieved no later than December 20, 2024.

San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek and Lompico Creek Pathogens TMDL

The San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek and Lompico Creek Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the Cities of Santa Cruz and Scotts Valley and the County of Santa Cruz, Traditional MS4 permittees, are a source of “Discharges from MS4s” subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:

The City of Santa Cruz, County of Santa Cruz and the City of Scotts Valley are assigned the following concentration based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Santa Cruz is assigned the above allocations in the San Lorenzo River Estuary, the San Lorenzo River, the Branciforte Creek, and the Carbonera Creek.

The County of Santa Cruz is assigned the above allocations in the San Lorenzo River, the Branciforte Creek, the Lompico Creek, and the Carbonera Creek,

The City of Scotts Valley is assigned above allocations in the Camp Evers Creek and the Carbonera Creek.

Deliverables/Actions Required:

Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program as required in detail in Attachment G of this Order. All allocations shall be achieved no later than June 8, 2024.

Soquel Lagoon, Soquel Creek and Noble Gulch Pathogens TMDL

The Soquel Lagoon, Soquel Creek and Noble Gulch Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the City of Capitola and the County of Santa Cruz, Traditional MS4 permittees, are a source of "Discharges from MS4s" subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:

The City of Capitola and the County of Santa Cruz are assigned the following concentration-based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Capitola is assigned the above allocations in Soquel Lagoon.

The County of Santa Cruz is assigned the above allocations in Soquel Creek and Noble Gulch.

Deliverables/Actions Required:

Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program per the requirements in Attachment G of this Order. All allocations shall be achieved by September 15, 2023.

Aptos Creek, Valencia Creek and Trout Gulch Pathogens TMDL

The Aptos Creek, Valencia Creek and Trout Gulch Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the County of Santa Cruz, a Traditional MS4 permittee, is a source of “Discharges from MS4s” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The County of Santa Cruz is assigned the following concentration based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The County of Santa Cruz is assigned the above allocations in Aptos Creek, Valencia Creek, and Trout Gulch.

Deliverables/Actions Required:

Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program per the requirements in Attachment G of this Order. All allocations shall be achieved October 29, 2023.

Santa Maria River Watershed Fecal Indicator Bacteria TMDL

The Santa Maria River Watershed Fecal Indicator Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Cities of Guadalupe and Santa Maria and the Counties of Santa Barbara and San Luis Obispo, Traditional MS4 permittees, and the Santa Maria Fairpark, a Non-Traditional MS4 permittee, are sources of “Discharges from MS4s” subject to this TMDL and must comply with the TMDL-related requirements in this Order. The Santa Maria Fairpark is assigned wasteload allocation in the Main Street Canal; however the Central Coast Water Board has determined that the Santa Maria Fairpark’s BMPs and monitoring effectively implement a Wasteload Allocation Attainment Program; therefore no further TMDL-related requirements in this Order are needed for the Santa Maria Fairpark.

Wasteload Allocations:

The Central Coast Water Board has determined that the City of Santa Maria, the City of Guadalupe, the County of Santa Barbara, and the County of San Luis Obispo are assigned the following concentration-based wasteload allocation:

(1) The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

(2) Based on a statistically sufficient number of samples (generally not less than five samples equally spaced over a 30-day period), the geometric mean of E. coli densities shall not exceed 126 Most Probable Number per 100 milliliters, and no sample shall exceed a one-sided confidence limit (C.L.) for contact recreation (90% C.L.) = 409 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Santa Maria is assigned the above wasteload allocations in the following water bodies: the Santa Maria River, the Main Street Canal, the Blosser Channel, and the Bradley Channel.

The County of Santa Barbara is assigned the above wasteload allocations in Orcutt Creek.

The County of San Luis Obispo is assigned the above wasteload allocations in Nipomo Creek.

The City of Guadalupe is assigned the above wasteload allocations in the Santa Maria River and Estuary.

Deliverables/Actions Required:

Compliance with this TMDL is dependent on the development and implementation of a Wasteload Allocation Attainment Program, or other integrated plan, per the requirements in Attachment G of this Order.

These wasteload allocations are receiving water allocations that must be attained by February 21, 2028 in accordance with a Wasteload Allocation Attainment Plan or other integrated plan. All wasteload allocations shall be achieved by February 21, 2028.

Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake Nitrogen Compounds and Orthophosphate TMDL

The Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake Nitrogen Compounds and Orthophosphate TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the Cities of Guadalupe and Santa Maria, and the Counties of Santa Barbara and San Luis Obispo, Traditional MS4 permittees, are sources of "Urban runoff" subject to this TMDL and must comply with the TMDL-related requirements of this TMDL.

Wasteload Allocations:

The City of Santa Maria, County of Santa Barbara, County of San Luis Obispo, and City of Guadalupe are assigned the following concentration-based wasteload allocations:

(Continued on Next Page)

Lower Santa Maria River Watershed Final Wasteload Allocations (WLAs) Table

Waterbody the Responsible Party is Discharging to 1, 2	Party Responsible for Allocation & NPDES/WDR number	Receiving Water Nitrate as N WLA (mg/L)	Receiving Water Orthophosphate as P WLA (mg/L)	Receiving Water Unionized Ammonia as N WLA (mg/L)
Santa Maria River (upstream from Highway 1), Blosser Channel, Bradley Channel, Main Street Canal, North Main Street Channel	City of Santa Maria (Storm drain discharges to MS4s) NPDES No. CAS000004 City of Guadalupe (Storm drain discharges to MS4s) (NPDES No. CAS000004)	Allocation-4 (see descriptions of allocations at bottom of this table)	Not Applicable	Allocation-3
Santa Maria River (downstream from Highway 1)	City of Guadalupe (Storm drain discharges to MS4s) (NPDES No. CAS000004)	Allocation-1	Allocation-2	Allocation-3
Nipomo Creek	County of San Luis Obispo (Storm drain discharges to MS4s) (NPDES No. CAS000004)	Allocation-4	Not Applicable	Allocation-3
Orcutt Creek	County of Santa Barbara (Storm drain discharges to MS4s) (NPDES No. CAS000004)	Allocation-1	Allocation-2	Allocation-3

Lower Santa Maria River Watershed Description of Allocations Table

Note A: Federal and State anti-degradation requirements apply to all wasteload and load allocations.

Note B: Achievement of final wasteload and load allocations to be determined on the basis of the number of measured exceedances and/or other criteria set forth in Section 4 of the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* (Listing Policy - State Water Resources Control Board, Resolution No. 2004-0063,

adopted September 2004) or as consistent with any relevant revisions of the Listing Policy promulgated in the future.

Allocation <small>Note A</small>	Compound	Concentration (mg/L) <small>Note B</small>
Allocation 1	Nitrate as N	Dry Season (May 1 – Oct. 31): 4.3 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 2	Orthophosphate as P	Dry Season (May 1 – Oct 31): 0.19 Wet Season (Nov 1 – Apr 30): 0.3
Allocation 3	Unionized Ammonia as N	Year-round: 0.025
Allocation 4	Nitrate as N	Year-round: 10

1 Responsible parties shall meet allocations in all receiving surface waterbodies of the responsible parties' discharges.

2 All reaches and tributaries unless otherwise noted.

Lower Santa Maria River Watershed Interim Wasteload Allocations (WLAs) Table

* Responsible parties shall meet allocations in all receiving surface waterbodies of the responsible parties' discharges.

Waterbody the Responsible Party is Discharging to	Party Responsible for Allocation (Source)	First Interim WLA	Second Interim WLA
All waterbodies the responsible party is assigned wasteload allocations (WLAs) in Table IX R-1	City of Santa Maria (Storm drain discharges to MS4s) Storm Water Permit NPDES No. CA00049981 City of Guadalupe (Storm drain discharges to MS4s) (NPDES Permit Pending) County of San Luis Obispo (Storm drain discharges to MS4s) (NPDES No. CAS000004) County of Santa Barbara (Storm drain discharges to MS4s) (NPDES No. CAS000004)	Achieve MUN standard-based and Unionized Ammonia objective-based allocations: Allocation-3 Allocation-4 By May 22, 2026	Achieve Wet Season (Nov. 1 to Apr. 30) Biostimulatory target-based TMDL allocations: Allocation-1 Allocation-2 By May 22, 2034

The above wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The TMDL includes WLAs for Permittees for controllable sources. The TMDL also includes WLAs for non-controllable sources, but are not assigned to Permittees. Therefore, the parties responsible for the allocation to controllable sources are not responsible for the allocation to natural sources. Allocations to non-controllable sources are not included in this Order.

Deliverables/Actions Required:

Compliance with this TMDL is dependent on the development and implementation of a Wasteload Allocation Attainment Program, or other integrated plan, per the requirements in Attachment G of this Order. All wasteload allocations shall be achieved by May 22, 2044.

Lower Salinas River and Reclamation Canal Basin and the Moro Cojo Slough Subwatershed Nitrogen Compounds and Orthophosphate TMDL

The Lower Salinas River and Reclamation Canal Basin and the Moro Cojo Slough Subwatershed Nitrogen Compounds and Orthophosphate TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the County of Monterey, a Traditional MS4 permittee, is a source of "Urban runoff" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The County of Monterey is assigned the following interim and final wasteload allocations:

County of Monterey Final Wasteload Allocations (WLAs) Table

Note A: Lower Salinas River: all reaches from downstream of Spreckels (downstream of monitoring site 309SSP) to the confluence with the Pacific Ocean including Salinas River Lagoon (North)

Note B: Santa Rita Creek: all reaches and tributaries, from the confluence with the Reclamation Canal to the uppermost reach of the waterbody.

Note C: Reclamation Canal: all reaches and tributaries, which includes from confluence with Tembladero Slough, to upstream confluence with Alisal Creek.

Note D: Gabilan Creek: all reaches and tributaries downstream of Crazy Horse Rd.

Note E: Natividad Creek: all reaches and tributaries, from the confluence with Carr Lake to the uppermost reach of the waterbody.

Note F: Alisal Creek: all reaches and tributaries from the confluence with the Reclamation Canal to the uppermost reach of the waterbody.

Waterbody the responsible party is discharging to	Receiving Water Nitrate as N WLA (mg/L)	Receiving Water Orthophosphate as P WLA (mg/L)	Receiving Water Unionized Ammonia as N WLA (mg/L)
Lower Salinas River downstream of Spreckels, CA <small>Note A</small>	Allocation-1 (see <i>description of allocations below</i>)	Allocation-2	Allocation-5

Waterbody the responsible party is discharging to	Receiving Water Nitrate as N WLA (mg/L)	Receiving Water Orthophosphate as P WLA (mg/L)	Receiving Water Unionized Ammonia as N WLA (mg/L)
Santa Rita Creek ^{Note B} , Reclamation Canal ^{Note C}	Allocation-3	Allocation-4	Allocation-5
Gabilan Creek ^{Note D}	Allocation-6	Allocation-2	Allocation-5
Natividad Creek ^{Note E} Alisal Creek ^{Note F}	Allocation-6	Allocation-2	Allocation-5

County of Monterey Description of Allocations Table

Note A: Federal and state anti-degradation requirements apply to all wasteload and load allocations.

Note B: Achievement of final wasteload and load allocations to be determined on the basis of the number of measured exceedances and/or other criteria set forth in Section 4 of the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Listing Policy - State Water Resources Control Board, Resolution No. 2004-0063, adopted September 2004), or as consistent with any relevant revisions of the Listing Policy promulgated in the future pursuant to Government Code section 11353.

Allocation ^{Note A}	Compound	Concentration (milligrams per liter) ^{Note B}
Allocation 1	Nitrate as N	Dry Season (May 1 – Oct 31): 1.4 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 2	Orthophosphate as P	Dry Season (May 1 – Oct 31): 0.07 Wet Season (Nov 1 – Apr 30): 0.3
Allocation 3	Nitrate as N	Dry Season (May 1 – Oct 31): 6.4 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 4	Orthophosphate as P	Dry Season (May 1 – Oct 31): 0.13 Wet Season (Nov 1 – Apr 30): 0.3
Allocation 5	Unionized Ammonia as N	Year-round: 0.025
Allocation 6	Nitrate as N	Dry Season (May 1 – Oct 31): 2.0 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 7	Nitrate as N	Dry Season (May 1 – Oct 31): 3.1 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 8	Total Nitrogen as N	Dry Season (May 1 – Oct 31): 1.7 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 9	Nitrate as N	Year-round: 10

County of Monterey Interim Wasteload Allocations (WLAs) Table

Waterbody	First Interim WLA	Second Interim WLA
All waterbodies given wasteload allocations (WLAs) as identified in Final Wasteload Allocations Table	Achieve MUN standard-based and Unionized Ammonia objective-based allocations: Allocation-5; Allocation-9 12 years after effective date of the TMDL (June 7, 2026)	Achieve Wet Season (Nov. 1 to Apr. 30) Biostimulatory target-based TMDL allocations: Wet Season Allocation/Waterbody combinations as identified in Final Wasteload Allocations Table 20 years after effective date of the TMDL (June 7, 2034)

The County of Monterey shall meet the above wasteload allocations in all the receiving surface waterbodies receiving the County's municipal storm water discharges.

The TMDL includes WLAs for Permittees for controllable sources. The TMDL also includes WLAs for non-controllable sources, but are not assigned to Permittees. Therefore, the parties responsible for the allocation to controllable sources are not responsible for the allocation to natural sources. Allocations to non-controllable sources are not included in this Order.

Deliverables/Actions Required:

Compliance with this TMDL is dependent on the development and implementation of a Wasteload Allocation Attainment Program as required in Attachment G of this Order. All wasteload allocations shall be achieved by May 7, 2044.

Santa Maria River Watershed Toxicity and Pesticides TMDL

Municipalities throughout the state are challenged with controlling pesticides in their urban storm water. Urban pesticide use is regulated by the California Department of Pesticide Regulation (DPR) and U.S. EPA. MS4 permittees have minimal to no authority over commercial and residential pesticide applications. The TMDL-related requirements in Attachment G of this Order reflect this constraint.

Phase II Entities:

The Central Coast Regional Water Board has determined that the Cities of Guadalupe and Santa Maria, and the County of Santa Barbara, Traditional MS4 permittees, are sources of "Urban storm water" subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:

The City of Santa Maria, County of Santa Barbara, and City of Guadalupe are assigned the following wasteload allocations:

Santa Maria River Watershed Wasteload Allocations Table

Responsible Parties	Source	Allocation
City of Santa Maria — NPDES No. CAS000004 County of Santa Barbara — NPDES No. CAS000004 City of Guadalupe	Urban Storm Water	3, 4 & 5

Allocation-3: Additive Toxicity TMDL for Pyrethroid Pesticides:

Pyrethroid pesticides contribute to additive toxicity in aquatic sediments; The numeric target for additive toxicity for pyrethroid pesticides is:

$$\frac{C \text{ (Pyrethroid 1)}}{NLC(\text{Pyrethroid 1})} + \frac{C \text{ (Pyrethroid 2)}}{NLC (\text{Pyrethroid 2})} = S; \text{ where } S \leq 1$$

Where:

C = the concentration of a pesticide measured in sediment.

NLC = the numeric LC50 for each pesticide present (Table 1).

S = the sum; a sum exceeding one (1.0) indicates that beneficial uses may be adversely affected.

The additive toxicity numeric target formula shall be applied when pyrethroid pesticides are present in the sediment.

Table 1: Pyrethroid Sediment LC50s⁴⁵

*Median lethal concentration (LC50) for amphipods (*Hyalella azteca*) organic carbon normalized concentrations (micrograms per gram OC)

Chemical	LC50 ng/g (ppb)	LC50 µg/g OC*(ppm)
Bifenthrin	12.9	0.52
Cyfluthrin	13.7	1.08
Cypermethrin	14.87	0.38
Esfenvalerate	41.8	1.54
Lambda-Cyhalothrin	5.6	0.45
Permethrin	200.7	10.83

Allocation-4: Aquatic Toxicity TMDLs (refer to Table 2)

Table 2: Standard Aquatic Toxicity Tests

Parameter	Test	Biological Endpoint Assessed
Water Column Toxicity	Water Flea – Ceriodaphnia (6-8 day chronic)	Survival and Reproduction
Sediment Toxicity	Hyalella Azteca (10-day chronic)	Survival

⁴⁵ LC50 = a measure of toxicity representing the concentration that will kill 50 percent of the sample population of a test species.

Allocation-5: Organochlorine Pesticide TMDLs (refer to Table 3, Table 4, Table 5)

Table 3: DDT Sediment Chemistry TMDLs

Note A: All reaches of all surface waters in the Santa Maria River watershed, including those listed.

Note B: All values are organic carbon normalized concentrations.

[All values are in units of microgram per kilogram]

Waterbodies Assigned TMDLs Note A	DDD, 4,4-(p,p-DDD)	DDE, 4,4-(p,p-DDE)	DDT, 4,4-(p,p-DDT)	Total DDT
Blosser Channel	9.1	5.5	6.5	10
Bradley Channel	9.1	5.5	6.5	10
Greene Valley Creek	9.1	5.5	6.5	10
Little Oso Flaco Creek	9.1	5.5	6.5	10
Main Street Canal	9.1	5.5	6.5	10
Orcutt Creek	9.1	5.5	6.5	10
Oso Flaco Creek	9.1	5.5	6.5	10
Oso Flaco Lake	9.1	5.5	6.5	10
Santa Maria River	9.1	5.5	6.5	10

Table 4: Santa Maria River Watershed Additional Organochlorine Pesticide Sediment Chemistry TMDLs (all units in micrograms per kilogram)

Note A: All reaches of all surface waters in the Santa Maria River watershed, including those listed.

Note B: All organochlorine pesticides by organic carbon normalized concentrations

Note C: Waterbody is currently achieving the TMDL.

Waterbodies Assigned TMDLs Note A	Chlordane	Dieldrin	Endrin	Toxaphene
Oso Flaco Lake	1.7	0.14	550	20
Santa Maria River	1.7	0.14	550	20
Orcutt Creek	1.7	0.14	550	20

Table 5: Santa Maria River Watershed Fish Tissue TMDLs for Organochlorine Pesticides

*ng/g: i.e., nanograms of pollutant per grams of fish tissue (e.g., a fillet).
 (ppb stands for parts per billion)

Waterbodies Assigned TMDLs	Chlordane ng/g* (ppb)	DDTs ng/g* (ppb)	Dieldrin ng/g* (ppb)	Toxaphene ng/g* (ppb)
Oso Flaco Lake	5.6	21		
Oso Flaco Creek	5.6	21		
Santa Maria River	5.6	21	0.46	6.1
Orcutt Creek	5.6	21	0.46	6.1

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

Deliverables/Actions Required:

Central Coast Water Board staff recognizes that attainment of the TMDL wasteload allocations will depend on the effectiveness of statewide pesticide programs and regulations by DPR and U.S. EPA to control pesticides. The statewide program described in the California Pesticide Management Plan for Water Quality, February 1997 (California Pesticide Plan) is an implementation plan of the Management Agency Agreement between DPR and the California Water Boards. The Cities of Guadalupe and Santa Maria, and the County of Santa Barbara should describe in the Wasteload Allocation Attainment Program or integrated plan how they plan to support and engage in the statewide efforts. The Cities of Guadalupe and Santa Maria, and the County of Santa Barbara are encouraged to use mitigation measures developed in the DPR surface water regulations as storm water Best Management Practices in the Wasteload Allocation Attainment Program or integrated plan.

The target date to achieve the TMDLs for pyrethroids is November 1, 2029. This estimate is based on the widespread availability of pyrethroids, including consumer usage, and current limited regulatory oversight. The target date to achieve the TMDLs for organochlorine pesticides (DDT, DDD, DDE, chlordane, eldrin, toxaphene, dieldrin) is November 1, 2044.

LOS ANGELES REGIONAL WATER BOARD TMDLs

The Los Angeles Regional Water Board has adopted two Phase I MS4 permits regulating discharges within the coastal watersheds of Los Angeles County, including 85 municipalities, Los Angeles County, and the Los Angeles Flood Control District (Order No. R4-2012-0175 as amended by State Water Board Order No. 2015-0075 and Order No. R4-2014-0024).

Additionally, the Los Angeles Regional Water Board is in the process of reissuing the Phase I permit that regulates municipal storm water discharges within the coastal watersheds of Ventura County including 10 municipalities, Ventura County, and the Ventura County Watershed Protection District.

These Phase I MS4 permits regulate all traditional Small MS4 permittees within the Los Angeles Region with the exception of the City of Avalon, located on Catalina Island. The Phase I MS4 permits contain TMDL-related requirements for applicable Small MS4 permittees. Therefore, with the exception of the City of Avalon, the only permittees in the jurisdiction of the Los Angeles Regional Water Board regulated under this Order are Non-traditional MS4 permittees.

To simplify this Order, TMDLs (and corresponding water bodies) that do not have Non-traditional MS4 permittee within the watershed, were removed from Attachment G. These TMDLs include the Upper Santa Clara River Chloride TMDL, the Santa Clara River Nitrogen Compounds TMDL, the Malibu Creek Bacteria TMDL, the Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Bacteria TMDL, the Santa Clara Reach 3 Chloride TMDL, the Malibu Creek Nutrients TMDL, the Ballona Creek Wetlands TMDL, and the Malibu Creek Trash TMDL.

The Los Angeles Regional Water Board has determined that the stormwater and non-stormwater discharges from MS4 permittees, including those from small MS4 permittees listed in the Los Angeles Regional Water Board TMDLs below, contribute to the impairment of the

water bodies subject to the TMDLs. Therefore, the designated entities listed below (and in Appendix G) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to one of the Los Angeles Region's Phase I MS4 permits.

The Regional Water Board determined that since these TMDL requirements, with the notable exception of the Avalon Beach TMDL, are new to the non-traditional entities, they should be given time to evaluate their programs and be allowed to make the choice of the two options presented. Therefore, a one-year timeframe was proposed to either: 1) develop and start implementing a plan; or 2) to enter into a cooperative agreement.

Avalon Beach Bacteria TMDL

This Order incorporates the MS4-specific requirements established by Cease and Desist Order R4-2012-0077, which includes implementation requirements and timelines for the City of Avalon to comply with the TMDL established for Avalon Beach.

Phase II Entities:

Through the adoption of Cease and Desist Order R4-2012-0077, the Los Angeles Regional Water Board has determined that MS4 discharges from the City of Avalon, a Traditional MS4, are a source of impairment to surface water bodies in its watershed, and must comply with the following wasteload allocations:

Wasteload Allocations:

The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

Geometric Mean Limits

Total coliform concentration shall not exceed 1,000/100 ml
Fecal coliform density shall not exceed 200/100 ml
Enterococcus density shall not exceed 35/100 ml

Single Sample Limits

Total coliform density shall not exceed 10,000/100 ml
Fecal coliform density shall not exceed 400/100 ml
Enterococcus density shall not exceed 104/100 ml
Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances

Summer Dry Weather shall not exceed 0 Allowable Exceedance Days*
Winter Dry Weather shall not exceed 9 Allowable Exceedance Days*

Wet Weather shall not exceed 17 Allowable Exceedance Days*

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded.

Deliverables/Actions Required:

This Order implements some of the requirements that are stipulated in Cease and Desist Order R4-2012-0077. Cease and Desist Order R4-2012-077 is enforceable through this Order by reference, including timelines for the City of Avalon to achieve compliance with this TMDL. The Los Angeles Regional Water Board has determined that the City of Avalon's compliance with the permit requirements of this Order and compliance with the MS4-specific requirements of Cease and Desist Order R4-2012-0077 is consistent with the assumptions, and will satisfy the requirements, of the MS4-specific provisions of the TMDL.

Santa Monica Bay Beaches Bacteria TMDL

The Santa Monica Bay Beaches Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the State Department of Parks and Recreation (Point Dume State Beach, Leo Carrillo State Beach, and Robert H Meyer Memorial State Beach), a Non-traditional MS4 permittee, is a source of "Storm water" and "Non-storm water discharges" subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:

The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

Geometric Mean Limits

The rolling 30-day geometric mean of the total coliform concentration shall not exceed 1,000/100 ml;

The rolling 30-day geometric mean of the Fecal coliform density shall not exceed 200/100 ml;

The rolling 30-day geometric mean of the Enterococcus density shall not exceed 35/100 ml;

Single Sample Limits

The total coliform density of a single sample shall not exceed 10,000/100 ml;

The fecal coliform concentration of a single sample shall not exceed 400/100 ml;

The enterococcus concentration of a single sample shall not exceed 104/100 ml;

The total coliform concentration of a single sample shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1;

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances* Wasteload Allocations in the Receiving Water:

Point Dume State Beach:

Dry weather: 0 days (based on both daily and weekly sampling),

Wet Weather: 3 days (daily sampling) or 1 day (weekly sampling).

Robert H Meyer Memorial State Beach:

Dry weather: 0 days (based on both daily and weekly sampling),

Wet Weather: 3 days (daily sampling) or 1 day (weekly sampling).

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded.

Deliverables/Actions Required:

The State Department of Parks and Recreation is required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the target dates to achieve the wasteload allocations are July 15, 2006 (to achieve dry weather WLAs during the summer period from April 1 – October 31); November 1, 2009 (to achieve dry weather WLAs during the winter period from November 1 – March 31); and July 15, 2021 (to achieve the wet weather WLAs). The dry weather allocations are therefore effective immediately. The State Department of Parks and Recreation may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Los Angeles River Nitrogen and Related Effects TMDL

The Los Angeles River Nitrogen and Related Effects TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4 permittees, are dischargers of storm water and non-storm water subject to this TMDL and must comply with the TMDL-related requirements of this Order.

The California State University Los Angeles and California State University Northridge are assigned the following Wasteload Allocations (WLAs):

WLAs for CSU Los Angeles and CSU Northridge Table

[All units are in milligrams per liter]

Waterbodies Assigned TMDLs	Ammonia 1-hr average	Ammonia 30-day average	Nitrate 30-day average	Nitrate 30-day average	Nitrate + Nitrite 30-day average
LA River above Los Angeles-Glendale Water Reclamation Plant (LAG)	4.7	1.6	8.0	1.0	8.0
LA River below LAG	8.7	2.4	8.0	1.0	8.0
LA River Tributaries	10.1	2.3	8.0	1.0	8.0

Deliverables/Actions Required:

The California State University Los Angeles and California State University Northridge are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the target date to achieve the wasteload allocations assigned to MS4 permittees is March 23, 2004. The allocations are therefore effective immediately. The California State University Los Angeles and/or California State University Northridge may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Los Angeles Harbor (including Cabrillo Beach and Main Shop Channel) Bacteria TMDL

The Los Angeles Harbor (including Cabrillo Beach and Main Shop Channel) Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Federal Correctional Institution Terminal Island and California State University Dominguez Hills, Non-traditional MS4 permittees, are sources of storm water and non-storm water subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations (WLAs):

The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

Rolling 30 day Geometric Mean Limits

Total coliform density shall not exceed 1,000/100 ml

Fecal coliform density shall not exceed 200/100 ml
Enterococcus density shall not exceed 35/100 ml

Single Sample Limits

Total coliform density shall not exceed 10,000/100 ml
Fecal coliform density shall not exceed 400/100 ml
Enterococcus density shall not exceed 104/100 ml
Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances* Wasteload Allocations in the Receiving Water:

Summer Dry Weather: 0 days (based on both daily and weekly sampling)
Winter Dry Weather: 8 days (daily sampling) or 1 day (weekly sampling)
Wet Weather: 15 days (daily sampling) or 3 days (weekly sampling)

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded.

Deliverables/Actions Required:

The Federal Correctional Institution Terminal Island and California State University Dominguez Hills are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the target date to achieve the wasteload allocations is March 10, 2010. The allocations are therefore effective immediately. The Federal Correctional Institution Terminal Island and/or California State University Dominguez Hills may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Calleguas Creek Watershed Toxicity TMDL

The Calleguas Creek Watershed Toxicity TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Naval Base Ventura County (Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park), Non-traditional MS4 permittees, are sources of stormwater and non-stormwater discharges subject to this Order and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):

The Calleguas Creek Watershed Toxicity TMDL assigns the following WLAs as receiving water allocations.

Toxicity: 1.0 TUC

Chlorpyrifos (Final WLA, µg/L): 0.014

Diazinon (Final WLA, µg/L): 0.10

Deliverables/Actions Required:

The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved by March 24, 2008. The allocations are therefore effective immediately. The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and/or Department of Parks and Recreation (Point Mugu State Park) may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation TMDL

The Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Naval Base Ventura County (Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park), Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):

The Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls and Siltation TMDL assigns the following interim and final WLAs as receiving water allocations.

Interim WLAs (ng/g), in-stream annual average at base of watershed:

Chlordane:	17.0
4,4-DDD:	66.0
4,4-DDE:	470.0
4,4-DDT:	110.0
Dieldrin:	3.0
PCBs:	3800.0

Toxaphene: 260.0

Final WLAs (ng/g), in-stream annual average at base of watershed:

Chlordane:	3.3
4,4-DDD:	2.0
4,4-DDE:	1.4
4,4-DDT:	0.3
Dieldrin:	0.2
PCBs:	120.0
Toxaphene:	0.6

Siltation WLA: 2,496 tons/year reduction in yield to Mugu Lagoon.

Deliverables/Actions Required:

The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved 20 years after the effective date of the TMDL (March 24, 2006). Therefore, the final WLAs shall be achieved by March 24, 2026.

Calleguas Creek Metals and Selenium TMDL

The Calleguas Creek Metals and Selenium TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Naval Base Ventura County (Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park), Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):

The Calleguas Creek Metals and Selenium TMDL assigns the following interim and final WLAs as receiving water allocations.

Interim WLAs:

Where Dry CMC/Dry CCC/ Wet CMC stands for, respectively:

Dry Weather Criterion Maximum Concentrations (Acute criteria),
Dry Weather Criterion Continuous Concentrations (Chronic criteria), and
Wet Weather Criterion Maximum Concentrations (Acute criteria).

Calleguas and Conejo Creeks (micrograms per liter) Table

Total Recoverable	Dry CMC	Dry CCC	Wet CMC
Copper	23	19	204

Total Recoverable	Dry CMC	Dry CCC	Wet CMC
Nickel	15	13	
Selenium			

Revolon Slough (micrograms per liter) Table

Total Recoverable	Dry CMC	Dry CCC	Wet CMC
Copper	23	19	204
Nickel	15	13	
Selenium	14	13	

Final WLAs:

Where: Q = Daily Storm volume
 WER = Water Effects Ratio

Calleguas and Conejo Creeks

Dry Weather; Total Recoverable (pounds per day)

Metal	Low Flow	Average Flow	Elevated Flow
Copper	0.04×WER -0.02	0.12×WER -0.02	0.18×WER -0.03
Nickel	0.100	0.120	0.440
Selenium			

Revolon Slough

Dry Weather; Total Recoverable (pounds per day)

Metal	Low Flow	Average Flow	Elevated Flow
Copper	0.03×WER -0.01	0.06×WER -0.03	0.13×WER -0.02
Nickel	0.050	0.069	0.116
Selenium	0.004	0.003	0.004

Calleguas and Conejo Creeks

Metal	Wet Weather Final WLA; Total Recoverable (lbs/day)
Copper	(0.00054 × Q ² × 0.032 – 0.17) × WER – 0.06
Nickel	0.014 × Q ² + 0.82 × Q
Selenium	

Revolon Slough

Metal	Wet Weather Final WLA; Total Recoverable (lbs/day)
Copper	$(0.0002 \times Q^2 \times 0.0005 \times Q) \times WER$
Nickel	$0.027 \times Q^2 + 0.47 \times Q$
Selenium	$0.027 \times Q^2 + 0.47 \times Q$

Interim Limits and Final WLAs for Mercury in Suspended Sediment

Final WLAs are set at 80% reduction of hydrologic simulation program – FORTRAN (HSPF) load estimates. Interim limits for mercury in suspended sediment are set equal to the highest annual load within each flow category, based on HSPF output for the years 1993-2003.

WLAs for Mercury (pounds per year) in Suspended Sediment Table

Flow Range	Calleguas Creek Interim	Calleguas Creek Final	Revolon Slough Interim	Revolon Slough Final
0 – 15,000 million gallons per year (MG/yr)	3.3	0.4	1.7	0.1
15,000 – 25,000 MG/yr	10.5	1.6	4	0.7
Above 25,000 MG/yr	64.6	9.3	10.2	1.8

Deliverables/Actions Required:

The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved 15 years after the effective date of the TMDL (March 26, 2007). Therefore, the final WLAs shall be achieved by March 26, 2022.

Ballona Creek Bacteria TMDL

The Ballona Creek Bacteria TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the University of California Los Angeles and Veteran Affairs of the Greater Los Angeles Healthcare System, Non-traditional MS4 permittees, are sources of non-storm water and storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLAs):

The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

Rolling 30-day Geometric Mean Limits

Total coliform density shall not exceed 1,000/100 ml

Fecal coliform density shall not exceed 200/100 ml

Enterococcus density shall not exceed 35/100 ml

Single Sample Limits

Total coliform density shall not exceed 10,000/100 ml

Fecal coliform density shall not exceed 400/100 ml

Enterococcus density shall not exceed 104/100 ml

Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances* Wasteload Allocations in the Receiving Water:

Dry weather: 5 days (based on daily sampling) or 1 day (based on weekly sampling)

Wet Weather: 15 days (based on daily sampling) or 2 days (based on weekly sampling)

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded

Deliverables/Actions Required:

The University of California Los Angeles and Veteran Affairs of the Greater Los Angeles Healthcare System are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved during dry weather by April 27, 2013, while the final WLAs during wet weather are to be achieved by July 15, 2021. Therefore, the final WLAs for dry weather are effective immediately. The University of California Los Angeles and/or Veteran Affairs of the Greater Los Angeles Healthcare System may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Santa Monica Bay Marine Debris TMDL

The Santa Monica Bay Marine Debris TMDL assigns a load allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Department of Parks and Recreation (Point Dume State Beach and Robert H. Meyer Memorial State Beach), a Non-traditional MS4 permittee, is a source of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Load Allocations (LA):

The following LA is a receiving water allocation.

Trash = 0

Zero trash is defined as no trash (debris greater than 5mm in size) discharged into waterbodies within the Santa Monica Bay Watershed Management Area (WMA) and then into Santa Monica Bay or on the shoreline of Santa Monica Bay.

Deliverables/Actions Required:

The Los Angeles Regional Board has determined that dischargers may achieve the Load Allocations by implementing a Minimum Frequency of Assessment and Collection Program (MFAC)/BMP program approved by the Executive Officer. Responsible entities will be deemed in compliance with the LAs if an MFAC/BMP program, approved by the Executive Officer, demonstrates that there is no accumulation of trash, as defined by the LA.

The Department of Parks and Recreation (Point Dume State Beach and Robert H. Meyer Memorial State Beach) shall develop a Trash Monitoring and Reporting Plan (TMRP) for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in their responsible areas within the Santa Monica Bay WMA or along Santa Monica Bay.

The TMDL specifies that the final LAs are to be achieved 5 years after the effective date of the TMDL (March 20, 2012). Therefore, the final LAs shall be achieved by March 20, 2017. The Department of Parks and Recreation (Point Dume State Beach and Robert H. Meyer Memorial State Beach) may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Los Angeles and Long Beach Harbors Toxics and Metals TMDL

The Los Angeles and Long Beach Harbors Toxics and Metals TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Federal Correctional Institution Terminal Island, Community Corrections Management Long Beach, and California State University Dominguez Hills, Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):

The Federal Correctional Institution Terminal Island, Community Corrections Management Long Beach, and California State University Dominguez Hills are assigned the following (receiving water) wasteload allocations:

Toxicity WLA: 1 TU_c

Metals WLAs for Dominguez Channel (wet weather only) (grams per day):

Mass-based WLA is shared and divided between MS4 permittees and Caltrans.

Total Copper: 1485.1

Total Lead: 6548.8

Total Zinc: 10685.5

Metals and PAH Compounds WLAs for Greater Harbor Waters Table

TMDL values are in units of kilogram per year

Waterbodies Assigned TMDLs	Total Copper TMDL	Total Lead TMDL	Total Zinc TMDL	Total PAHs TMDL
Dominguez Channel Estuary	22.4	54.2	271.8	0.134
Consolidated Slip	2.73	3.63	28.7	0.0058
Inner Harbor	1.7	34.0	115.9	0.088
Outer Harbor	0.91	26.1	81.5	0.105
Fish Harbor	0.00017	0.54	1.62	0.007
Cabrillo Marina	0.0196	0.289	0.74	0.00016
San Pedro Bay	20.3	54.7	213.1	1.76
LA River Estuary	35.3	65.7	242.0	2.31

Sediment Wasteload Allocations for Dominguez Channel Estuary, Consolidated Slip and Fish Harbor (mg/kg dry sediment):

Cadmium: 1.2

Chromium: 81

Mercury: 0.15

Bioaccumulative Compounds Wasteload Allocations Table

TMDL values are in units of gram per year

Waterbodies Assigned TMDLs	DDT Total TMDL	PCBs Total TMDL
Dominguez Channel Estuary	0.250	0.207
Consolidated Slip	0.009	0.004
Inner Harbor	0.051	0.059
Outer Harbor	0.005	0.020
Fish Harbor	0.0003	0.0019
Cabrillo Marina	0.000028	0.000025
Inner Cabrillo Beach	0.0001	0.0003
San Pedro Bay	0.049	0.44
LA River Estuary	0.100	0.324

Deliverables/Actions Required:

The Federal Correctional Institution Terminal Island, Community Corrections Management Long Beach, and California State University Dominguez Hills are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved 20 years after the effective date of the TMDL (March 23, 2012). Therefore, the final WLAs shall be achieved by March 23, 2032.

Los Angeles River Bacteria TMDL

The Los Angeles Regional Board has determined that the Los Angeles River Bacteria TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):

The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

Geometric Mean Limits

E. coli density shall not exceed 126/100 ml

Single Sample Limits

E. coli density shall not exceed 235/100 ml

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances* Wasteload Allocations in the Receiving Water:

Summer Dry Weather: 5 days (based on daily sampling), or 1 day (based on weekly sampling)

Waters not subject to the High Flow Suspension:

Wet Weather: 15 days (daily sampling), or 2 days (weekly sampling)

Waters subject to the High Flow Suspension:

Wet Weather: 10 days (daily sampling), or 2 (weekly sampling)

* = The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded

Deliverables/Actions Required:

The California State University Los Angeles and California State University Northridge are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final wet-weather WLAs are to be achieved 25 years after the effective date of the TMDL. Therefore, the final wet weather WLAs are to be achieved by March 23, 2037. The TMDL also specifies several final dry weather achievement dates based upon where in the watershed the discharge(s) occur. Therefore, the final dry weather WLAs are to be achieved according to the table below.

Waterbody Segment	Achieve Final dry weather WLA by:
Segment B (upper and middle Reach 2)	March 23, 2022
Segment B Tributaries (Rio Hondo & Arroyo Seco)	September 23, 2023
Segment A (lower Reach 2 and Reach 1)	March 23, 2024
Segment A Tributaries (Compton Creek)	September 23, 2025
Segment E (Reach 6)	March 23, 2025
Segment E Tributaries (Dry Canyon, McCoy and Bell Creeks, and Aliso Canyon Wash)	March 23, 2029
Segment C (lower Reach 4 and Reach 3)	September 23, 2030
Segment C Tributaries (Tujunga Wash, Burbank Western Channel and Verdugo Wash)	September 23, 2030
Segment D (Reach 5 and upper Reach 4)	September 23, 2030
Segment D Tributaries (Bull Creek)	September 23, 2030

Los Angeles River and Tributaries Metals TMDL

The Los Angeles River and Tributaries Metals TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4 permittees, are sources of storm water and non-storm subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):

Dry-Weather WLAs (total recoverable metals)

Dry-Weather WLAs (Total recoverable metals) Table

All values are in units of micrograms per liter

Waterbodies Assigned TMDLs	Copper TMDL	Lead TMDL	Zinc TMDL	Selenium TMDL
LA River Reach 5,6 and Bell Creek	30	170		5
LA River Reach 4	103	83		

Waterbodies Assigned TMDLs	Copper TMDL	Lead TMDL	Zinc TMDL	Selenium TMDL
Tujunga Wash	166	83		
LA River Reach 3 above LA-Glendale WRP	91	102		
Verdugo Wash	50	102		
LA River Reach 3 below LA-Glendale WRP	103	100		
Burbank Western Channel (above WRP)	124	126		
Burbank Western Channel (below WRP)	90	75		
LA River Reach 2	87	94		
Arroyo Seco	29	94		
LA River Reach 1	91	102		
Compton Creek	64	73		
Rio Hondo Reach 1	126	37	131	
Monrovia Canyon			66	

Wet-Weather WLAs (total recoverable metals) (micrograms per liter)

Cadmium = 3.1

Copper = 67.5

Lead = 94

Zinc = 159

Deliverables/Actions Required:

The California State University Los Angeles and California State University Northridge are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final dry weather WLAs shall be achieved by January 11, 2024, and the final wet weather WLAs shall be achieved by January 11, 2028.

Ballona Creek Metals TMDL

The Ballona Creek Metals TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System, Non-traditional MS4s, are sources of storm water and non-storm discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

Dry-Weather WLAs (total recoverable metals) (shared) (grams per day):

Ballona Creek: Copper: 1,457.6 Lead: 805.0 Zinc: 18,302.1

Sepulveda Channel: Copper: 540.6 Lead: 298.7 Zinc: 6,790.8

Wet-Weather WLAs (total recoverable metals) (shared) (grams per day):

Copper:	$1.297 \times 10^{-5} \times L$
Lead:	$7.265 \times 10^{-5} \times L$
Zinc:	$9.917 \times 10^{-5} \times L$

Where L = daily storm volume (liters)

Deliverables/Actions Required:

The University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs during dry weather are to be achieved by January 11, 2016. The final WLAs during wet weather shall be achieved by January 11, 2021. The final WLAs during dry weather are therefore effective immediately. The University of California Los Angeles and/or the Veteran Affairs of the Greater Los Angeles Healthcare System may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

San Gabriel River Metals and Selenium TMDL

The San Gabriel River Metals and Selenium TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State Polytechnic University, Pomona, a Non-traditional MS4, is a source of urban runoff subject to this Order and is responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

The San Gabriel River Metals and Selenium TMDL assigns WLAs to urban runoff in Walnut and San Jose Creeks, tributaries to the San Gabriel River for entities within the city of Pomona, which includes California State Polytechnic University, Pomona. Therefore, only WLAs assigned to Walnut and San Jose Creeks will be included in this Order.

Selenium allocation for San Jose Creek Reach 1 and Reach 2 (total recoverable metals):

Point Sources: Municipal Stormwater
Waste Load Allocation: 5 micrograms per liter

Deliverables/Actions Required:

The California State Polytechnic University, Pomona is required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA; or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an

approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL does not specify a final attainment date.

San Gabriel River Indicator Bacteria TMDL

The San Gabriel River Indicator Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State Polytechnic University, Pomona, a Non-traditional MS4, is a source of wet- and dry-weather discharges from MS4s subject to this Order and is responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

The San Gabriel River Indicator Bacteria TMDL assigns WLAs to urban runoff in the San Gabriel River and its tributaries.

The following WLAs are receiving water allocations. Geometric mean values shall be calculated weekly as a rolling geometric mean using a minimum of 5 samples, for six week periods starting all calculation weeks on Sunday. Geometric mean limits may not be exceeded at any time.

Geometric Mean Limits

E. coli density shall not exceed 126/100 ml

Single Sample Limits

E. coli density shall not exceed 235/100 ml

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances* Wasteload Allocations in the Receiving Water:

Summer Dry Weather: 5 days (based on daily sampling), or 1 day (based on weekly sampling)

Waters not subject to the High Flow Suspension:

Wet Weather: 17 days (daily sampling), or 3 days (weekly sampling)

Waters subject to the High Flow Suspension:

Wet Weather: 11 days (daily sampling), or 2 (weekly sampling)

* = The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample limits.

A storm year is defined as the period from November 1 through October 31.

Deliverables/Actions Required:

The California State Polytechnic University, Pomona is required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA; or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an